

NASA TECH BRIEF

Langley Research Center



NASA Tech Briefs announce new technology derived from the U.S. space program. They are issued to encourage commercial application. Tech Briefs are available on a subscription basis from the National Technical Information Service, Springfield, Virginia 22151. Requests for individual copies or questions relating to the Tech Brief program may be directed to the Technology Utilization Office, NASA, Code KT, Washington, D.C. 20546.

Visual Alinement Aid

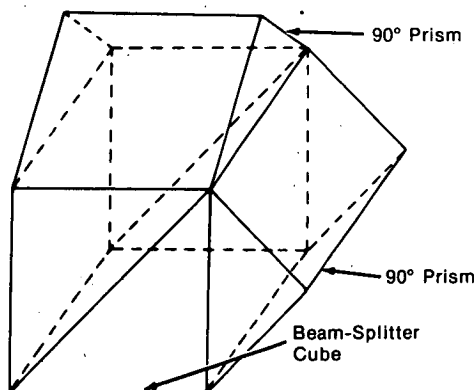


Figure 1. Assembly Diagram of Alinement Aid

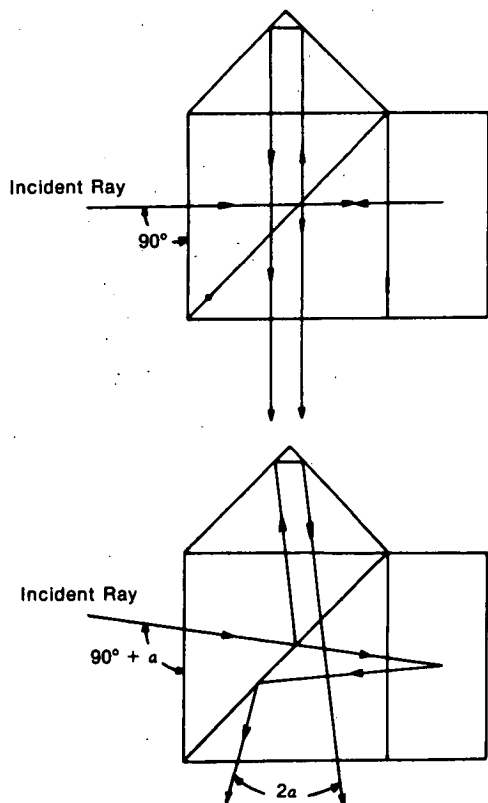


Figure 2. Two-Dimensional Ray Trace

A new visual alinement aid provides a means of optically determining alinement with a line to a distant source and is an improvement over the internal reticles used with telescopes. The reticles of such telescopes require illumination which fogs the field of view. The new device can be attached over the objective lens of any existing telescope or sight, or it can be used alone and, as such, is extremely compact.

This alinement aid consists of a beam-splitter cube and two 90° prisms cemented together as shown in Figure 1. The various components can be made as two pieces, eliminating all seams except the beam-splitter diagonal. Figure 2 illustrates the manner in which a small angular displacement will produce two beams with a relative angular displacement of twice the error.

A third 90° prism can be added as shown in Figure 3. The addition of the third prism to obtain the configuration shown makes the instrument "in-line."

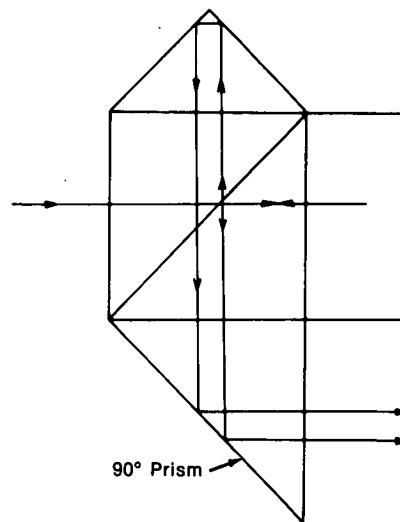


Figure 3. In-Line Modification

(continued overleaf)

Note:

Requests for further information may be directed to:

Technology Utilization Officer
Langley Research Center
Mail Stop 139-A
Hampton, Virginia 23665
Reference: B75-10228

Patent status:

Inquiries concerning rights for the commercial use of this invention should be addressed to:

Patent Counsel
Langley Research Center
Mail Stop 313
Hampton, Virginia 23665

Source: John M. Franke
(LAR-11842)